Anti-HIV duoCAR-T cell therapy for HIV infection

Grant Award Details

Anti-HIV duoCAR-T cell therapy for HIV infection

Grant Type: Clinical Trial Stage Projects

Grant Number: CLIN2-12090

Project Objective: Goal of this project is to conduct a Phase 1/2 clinical trial to evaluate safety and efficacy of LVgp120 duo CAR-T cells in HIV infected patients in the absence of ART.

Investigator:

Name:	Steven Deeks
Institution:	University of California, San Francisco
Type:	PI

Disease Focus: HIV/AIDS, Immune Disease, Infectious Disease

Human Stem Cell Use: Adult Stem Cell

Award Value: $8,970,732

Status: Pre-Active

Grant Application Details

Application Title: Anti-HIV duoCAR-T cell therapy for HIV infection

Public Abstract:

Therapeutic Candidate or Device

HIV-specific CAR-T cells

Indication

Management of HIV infection

Therapeutic Mechanism

We will modify T cells such that they are able to directly control HIV in the absence of therapy. Should this work, these cells will result in long-term control of HIV in absence of any ongoing treatment, a version of a HIV "cure". We are developing methods to make such an approach safe, scalable and affordable.

Unmet Medical Need

Many people are not able to access and adhere to long-term antiretroviral therapy. This approach will address the needs to those who are not able to respond to current approaches, which we estimate to be up to 50% of those affected by HIV globally.

Project Objective

Phase I study completed

Major Proposed Activities

- Manufacture of the LVgp120duoCAR vector
- Completion of a phase I/IIa dose-escalation clinical trial
- Optimize the development process to make the product affordable and scalable

Statement of Benefit to California:

The HIV pandemic in the United States largely started in the major urban centers of California and New York. Many of those infected with HIV in California are having challenges tolerating antiretroviral therapy; this is particularly true for the first generation of survivors as they require complex regimens. Many other people have socioeconomic and other barriers that prevent them from responding to current approaches. A "single-shot" cure for HIV would address many of these limitations.

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